Year 9 Materials – Flower Power

Week One : Lessons 1-7

Lesson Sequence	Resources	Learning Intentions

<u>Introduction into Course</u>
• Talk about Technology Cycle (with different focus each term)
• Term One-The technology cycle
• Term Two-Brief Development
• Term Three-Planning
• Term Four-Evaluation
• Recap process and structure from their last technology
• Brainstorm materials and their sources (hard/soft)
  - Talk about natural and manmade
  - Composites
• Set student booklets into folders
• Finish lesson title page – finish homework
	Student module booklet
	• Technology Cycle for that module
	• On board
	• A4
	• Show examples
	• Clear files
		Students can:
		• Develop understanding of technological process
		• Relate the process of technology to the new context.

<u>Codes of Practice</u>
<u>Safety in the Environment of Practice</u>
• Show students through workshop. Focus on dangers and safe use of equipment with as processes
• Student choice safety area and produce effective poster.
Show safety video to reinforce importance of this topic.
 	
<u>Skills Development</u>
• Pencil holder – teach skills, (use ' tasks in plastics' sheet.)
  - marking out
  - cutting
  - finish
  - assembly
  - drilling
  - folding
 	
Teacher demonstrates use of tools, ie squaring off, parallel, scribing, rules, measuring, metric system and standards. The common use of hand tools, cutting tools and including machines.(scroll saws, bandsaws, drill presses, sanders and buffers)
Codes of practice, ie safety in practice with the use of tools and machines. Correct working procedures to gain desired outcome.
	• Workshop equipment and processes
	• TV/DVD
	
	Student Booklet
	Instruction sheet on process of simple product
	Workshop facilities
	Hand tools
	Safety certificates Safety booklet with
		• are aware of their surroundings and the dangers that lay within.
		• Understand that each student is responsible for own actions.
		
		• Gain an understanding of the correct use of equipment and tools.
		• Are competent in using tools safely
		• Experience using plastic as a material.

• Keyring Show use of chalking technique as a second skills project to reinforce taught knowledge. Use this task as an introduction of machine buffing. • Safety certificate, hand out safety certificate to students once they have shown competence.		•

Lessons 7 - 18

Lesson Sequence	Resources	Learning Intentions
Technology Cycle *Technological Practice* Introduction to issue; Revise the technology cycle of that term. Introduce the issue of an over supply of test tubes and use this to design and develop a product. Discuss the topic with students and hand out given class brief. (1-2 lessons). Teach students idea generation from work sheet. Discuss possibilities of processes and materials. Students look at idea generation and what the test tube could be used for/hold	Tech. cycle flow chart. Examples of required stationary. Year 9 teachers handbook	Students understand the aims of the course and how graphics is an integral part of technology.
Stakeholder identification; Who is the product to be designed for? What are their likes /dislikes / interests? Use the worksheets to aid the students identifying their key stakeholder.	Worksheets.	Understand the stages of the technology cycle and those specific to that term.
Initial brief: (term 2 focus) Write a simple statement that explains what the need is, who it is for and what it will show.	Worksheet stakeholder profile	Develop an understanding of the stakeholders needs. Develop an understanding of possible opportunities.

Planning: (Term 3 focus) Reflect on the tech. cycle studied in the previous term. Draw up a planning chart that shows these steps in the correct order. Planning for students own project: What are the key stages to be achieved in the given (6 weeks) timeframe? What are milestones and are there any that need to be met? What resources are needed at different stages during the project?	Examples of different planning tools, (Gantt charts, diaries, etc) Real life examples of project management. Student worksheets	Students will learn the skills required to develop an initial brief. Importance of planning will be understood. Students will understand what milestones and resources are and why we consider them.
Research: Explore stakeholder requirements existing solutions (This can be done in the computer room) Look at clip art for design ideas, of design they struggle with.	Worksheets and colour pencils.	
Concepts: Use ideas from idea generation. Draw concepts that meet stakeholder requirements Apply annotations to communicate your ideas.	Drawing equipment. Card, scissors, tape, craft knifes, cutting matts.	Understand and apply 2D and 3D sketching skills to visually communicate their design ideas
Evaluation (term 4 focus): Present your product ideas to your stakeholder/s for feedback. Record their constructive comments and suggestions for modifications.	Worksheets and colour pencils.	Understand the importance of feedback, and the reasons for getting stakeholder feedback.
Development: Apply the feedback given to you by the stakeholders. Make any adjustments requested and focus on any improvements needed. Draw an enlarged more detailed view of your refined concept, support changes with annotations.	Worksheets. Orthographic Projection.	
Mock Up: Use mock ups to test design ideas and To make modifications to product. (scale 1:1) Use the mock ups as templates. Add changes to development.	Drawing equipment. Card, scissors, tape, craft knifes, cutting matts.	Learn how to cut and fold card. Learn to use cutting equipment safely and the use of cutting mats to protect desk tops. Understand the importance of using a mock up as a form of testing and trialing.

Evaluation (term 4 focus): Evaluate and modify where necessary from stakeholder feedback. Final brief and specifications: (term 2 focus) Create a final written statement that encapsulates students design intentions. Update any specifications altered by your stakeholder. Working drawing: Teach 2D drawings plan / Elevations and dimensions <u>Manufacturing</u> • Development of Final Outcome (Workshop Practice/ application of skill development) • Gluing procedures and safe use. • Joining and finishing, butt and lap joints. • Assembly:- Use of jigs and fixtures (Codes of Practice) • Finishing techniques to achieve high quality end product. (Plastics forming and molding.) – filing, sanding and buffing.	Worksheets. Orthographic Projection. • Workshop equipment • Glues (plastic) • Masks • Line heater/oven • Leather gloves Continuum of skills development learnt previously.	Understand the importance of feedback, and the reasons for getting stakeholder feedback. Understand the importance of a final brief and detailed specs. Students will understand the importance of accuracy to create a quality outcome. Apply relevant knowledge and skills to manufacture an outcome

Lessons 19 - 34

Lesson Sequence	Resources	Learning Intentions
<u>Plastics Theory</u> • Teach types of plastics and properties/uses. • Manufacturing of plastics and teach the plastics age. • Look at effects on society / products and side-effects, i.e. environment. Look at future trends in plastics. <u>Evaluation:-</u> Project and course.	• Plastic hand-outs. • Click view video • TV/DVD • Plastic examples • Information on properties	• are familiar with the material they are using and to be aware of the possible implications in using plastics.

Lessons 34 – until end of term.